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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/076,514	02/19/2002	Ludwig Volkel	52203	3431

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NOVAK DRUCE DELUCA & QUIGG, LLP  
1300 EYE STREET NW  
SUITE 400 EAST TOWER  
WASHINGTON, DC 20005

EXAMINER

YOUNG, MICAH PAUL

ART UNIT PAPER NUMBER

1618

DATE MAILED: 10/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/076,514

Applicant(s)

VOLKEL ET AL.

Examiner

Micah-Paul Young

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 09 August 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 6,12,13 and 23-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 6,12,13 and 23-25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

### DETAILED ACTION

**Acknowledgement of Papers Received:** Amendment/Response dated 8/9/06.

#### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. Claims 6,12,13 and 23-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combined disclosures of Klein (USPN 2,870,198 hereafter '198) in view of Spires (USPN 4,394,377 hereafter '377). The claims are drawn to a method of making choline ascorbate comprising reacting ascorbic acid with trimethylamine and ethylene oxide at a lowered temperature.

4. The '198 patent discloses a method of making crystalline choline salts comprising reacting trimethylamine, gaseous ethylene oxide and anhydrous acids at temperatures from 0-5<sup>0</sup>C (Example 1). The resulting choline ascorbate is crystalline and has a purity of 99.9% (*Ibid.*). The reference discloses that any organic acid can be used in making the crystalline choline salts including citric or tartaric, yet is silent to the inclusion of ascorbic acid into the formulation (claims). However the inclusion of a specific organic acid into a crystallization reaction is well within the level of skill in the art especially when the organic acids are well known in the art. This can be seen in the '377 patent.

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5. The '377 patent discloses a ruminant animal feed composition comprising choline salts (col. 3, lin. 49-54). The choline is preferable crystalline and is in acid addition form (col. 3, lin. 62-63). The acid salts include citrate, ascorbate and bitartrate (col. 3, lin. 66-67). The crystalline salts are commonly available and are easier to handle. It would have been obvious to substitute any organic salt into the reaction of the '198 patent in order to product pure and stable choline salts.

6. Regarding the order of steps, applicant is reminded that absent a showing of new or unexpected results the selection of any order of processing steps is prima facie obvious. See also *In re Burhans*, 154 F.2d 690, 69 USPQ 330 (CCPA 1946).

7. Regarding the anhydrous crystalline diffraction lines, it remains the position of the Examiner that such limitations would be inherent to any crystalline product produced using the same ingredients. The anhydrous crystalline choline salt of the prior art is produced by reacting trimethylamine, gaseous ethylene oxide with an organic acid carrying out the reaction in a temperature range from 0-5°C. The Office does not have the facilities for examining and comparing applicant's product with the product of the prior art in order to establish that the product of the prior art does not possess the same material structural and functional characteristics of the claimed product. In the absence of evidence to the contrary, the burden is upon the applicant to prove that the claimed products are functionally different than those taught by the prior art and to establish patentable differences. See *Ex parte Phillips*, 28 U.S.P.Q.2d 1302, 1303 (PTO Bd. Pat. App. & Int. 1993), *Ex parte Gray*, 10 USPQ2d 1922, 1923 (PTO Bd. Pat. App. & Int.) and *In re Best*, 562 F.2d 1252, 195 USPQ 430 (CCPA 1977).

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8. With these aspects in mind it would have been obvious to include an organic acid as suggested by the '377 patent into the process of the '198 patent in order to improve the purity of the crystal. One of ordinary skill in the art would have been motivated to include the organic acids of the '377 into the process of the '198 patent with an expected result of an improved choline salt useful in ruminant animal feed compositions.

*Response to Arguments*

9. Applicant's arguments filed 8/9/06 have been fully considered but they are not persuasive. Applicant argues that:

- a. The choline salt of the '198 are not crystalline
- b. The process of the instant claims is distinct since choline is not included in the mixture, but is a result of a reaction.
- c. The process of the '198 patent crystallizes the choline outside of the temperature range of the instant claims.

10. Regarding argument a. and c., applicant is directed to Example 1 of the '198 patent where the reference states that crystalline choline salts are recovered from the reaction process. Further regarding argument c., applicant is also directed to Example 1 where the crystallization occurs at low temperatures while the mixture is being cooled to 5<sup>0</sup>C. The claims recite that the crystallization occurs between 0 and 5<sup>0</sup>C (claim 2). These disclosures obviate the instant claims.

11. Regarding argument b., and the presence of choline in the reaction of the prior art, it is the position of the Examiner that the claims broadly recite the reaction steps and do not actively exclude the presence of choline in the process. The process of the prior art comprise a mixture of

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water, a miscible solvent, trimethylamine and gaseous ethylene oxide, reacted at a temperature from 0-5<sup>0</sup>C. The resultant product is anhydrous and crystalline. A product produced with identical ingredients under identical conditions would possess identical properties. For these reasons at least the claims remain obviated by the prior art.

### ***Conclusion***

12. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Micah-Paul Young whose telephone number is 571-272-0608. The examiner can normally be reached on M-F 7:00-4:30 every other Monday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Hartley can be reached on 571-272-0616. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



MP Young

Micah-Paul Young  
Examiner  
Art Unit 1618



MICHAEL G. HARTLEY  
SUPERVISORY PATENT EXAMINER